Florida Transportation System Management and Operations

Strategic Plan

Draft Version 0.9-1

February 16, 2011

Prepared for:

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DOCUMENT CONTROL PANEL		
File Name:	2011-Feb-16-TSMO_Strategic_Plan-DRAFT-v0-9-1.docx	
File Location:		
Version Number:	0.9-1	
Name		**Date**
Created By:	Anita Vandervalk, Cambridge Systematics	02/2010
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List of Acronyms and Abbreviations

AASHTO..... American Association of State Highway and Transportation Officials
ATM .....Active Traffic Management
ATMS ..... Advanced Traffic Management System
BC .....Benefit-Cost
CO.....Central Office
DOT .....Department(s) of Transportation
FARS .....Fatality Analysis Reporting System
FDOT..... Florida Department of Transportation
FHWA .....Federal Highway Administration
FTA..... Federal Transit Administration
FTP .....Florida Transportation Plan
ICM.....Integrated Corridor Management
ITS ..... Intelligent Transportation Systems
MOT ..... Maintenance of Traffic
MOU..... Memorandum of Understanding
MPO.....Metropolitan Planning Organization
NHTSA.....National Highway Traffic Safety Administration
NPV .....Net Present Value
RITA.....Research and Innovative Technology Administration
TSM&O.....Transportation System Management & Operations
TTI.....Texas Transportation Institute
USDOT.....United States Department of Transportation
VMT .....Vehicle Miles Traveled

1 Executive Summary

Transportation Systems Management and Operations (TSM&O) is a new program within the Florida Department of Transportation (FDOT) that is based upon:

- Performance measurement;
- Active management of the multi-modal transportation network; and
- Positive safety and mobility outcome delivery to Florida's travelling public.

Initially envisioned in 2008 and formally endorsed as a program in 2010, TSM&O offers ways to maximize use of limited transportation funding to maximize transportation system efficiency and effectiveness.

The *TSM&O Tier 2 Business Plan* defines the following TSM&O vision and mission statements:

> **Vision:** To operate our transportation system at the highest level of cost effective performance.
>
> **Mission:** To deploy a customer-driven TSM&O program focused on mobility outcomes through real-time and effective management of the existing transportation system toward its maximum efficiency.

The vision as defined in the *Tier 2 Plan* for arterial and freeway operations is:

> To operate our transportation system at the highest level of cost effective performance, resulting in reduced excess delay on arterials AND freeways, real-time management and traveller information for all modes, and seamless coordination with ALL operating agencies.

Additionally, the TSM&O formal definition and clarifying statement are shown below:

> **Formal Definition:** TSM&O is an integrated program to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety, and reliability of our transportation system.
>
> **Clarifying Statement:** TSM&O is a new program within FDOT based on measuring performance, actively managing the multimodal transportation network, and delivering positive safety and mobility outcomes to the travelling public in Florida.

This *TSM&O Strategic Plan* document presents the high-level structure for establishing and maintaining FDOT's TSM&O Program. Taken in conjunction with the *TSM&O Tier 2 Business Plan*, this *Strategic Plan* will ensure that implementation occurs concurrently through FDOT Operations and Planning, the Project Development Cycle, and in Policy and Procedure.

2 Document Structure

The following describes the sections of the *TSM&O Strategic Plan*.

Section 1, Executive Summary – provides a high-level overview of the *TSM&O Strategic Plan*.

Section 2, Document Structure – provides the document organization for the various sections of the *TSM&O Strategic Plan*.

Section 3, Introduction – describes the impetus for evolving to a TSM&O Program approach. This section describes the current status of TSM&O at the Central Office (CO) and District levels. In addition, this section describes the status and accomplishments of intelligent transportation systems (ITS), operations, and planning as well as recent changes in these areas leading to a need for TSM&O. This *Strategic Plan* is consistent with the *TSM&O Tier 2 Business Plan* approved by the Executive Board on May 20, 2010; the *2005 ITS Strategic Plan Update;* FDOT's mission statement; and the 2020 Florida Transportation Plan (FTP) and its Short Range Component. This section also includes a description of the *Tier 2 Business Plan* – Leadership; Strategic Planning; Customer and Market Focus; Measurement, Analysis, and Knowledge Management; Human Resources Focus; Process Management; and Organization Performance Results.

Section 4, Implementing TSM&O – describes the activities and actions needed to deploy TSM&O, including those affecting operations, planning, project development, construction, and maintenance within FDOT. These activities are discussed in terms of people (i.e., District and CO champions, task teams), processes (i.e., performance measures, network identification, pilot programs), and tools (i.e., travel time data collection/analysis/archive/reporting, travel demand, and simulation models). This section also discusses the need for changes to policies and procedures.

Section 5, Timeline – suggests timeframes for when key actions from the *TSM&O Strategic Plan* and *Tier 2 Business Plan* may begin as described in the *Tier 2 Business Plan*. Phased action plans could include phases such as:

- Phase 1 – District networks and pilot projects defined, develop technical memos
- Phase 2 – Performance measures for business plan established, plan in place to collect and report
- Phase 3 – Outreach, incorporation in policies, document results

The action plan could also include development of Technical Memoranda (i.e., connected vehicle, new data sources, benefit cost for projects, funding flexibility across programs and agencies, and work zone sketch planning).

Section 6, Resources – outlines resources required to implement actions in the *TSM&O Strategic Plan* and *TSM&O Tier 2 Business Plan*.

Section 7, References – lists sources of information referenced throughout this document.

Appendix A – provides the *TSM&O Tier 2 Business Plan*.

3 Introduction

The provision and operation of efficient transportation systems to move people and goods safely continues to be a high priority for FDOT.

In April 2010, Florida's population was over 18.7 million (Source: *A Pocket Guide to Florida Transportation Trends and Conditions 2010*, FDOT Office of Policy), an increase of nearly three million residents per decade since 1990. This represents an estimated average population increase of 821 people per day (300,000 annually). National vehicle-miles travelled (VMT) are often used for estimating congestion, air quality, and potential gas-tax revenues; they are a common measure of roadway use. VMT increased to nearly 286 thousand in December 2010, an increase of 0.83 percent from the prior year (Source: *VMT Report 2010*, FDOT Statistics Office). While VMT decreased by one percent in 2009, recent VMT figures indicate Florida's surface transportation system continues to face rising demand from all sectors (Sources: *A Pocket Guide to Florida Transportation Trends and Conditions 2010*, FDOT Office of Policy and *VMT Report 2010*, FDOT Statistics Office).

In its *2010 Urban Mobility Report*, the Texas Transportation Institute (TTI) identifies seven congested urban areas within Florida among the nation's top 439 urban areas. The 2010 report states that annually, in Florida's urbanized areas, 216 million gallons of excess fuel are wasted and 274 million person-hours are spent in congestion resulting in a total annual cost of congestion of $6.4 billion.

The recent decline in VMT due to the 2008/2009 economic crisis is short-lived, and experts predict congestion to continue in its pattern of growth. To maintain Florida's economic competitiveness, reducing congestion is not the desired policy direction if the result is lower person- and freight-throughput and mobility. Mobility, accompanied with increased throughput and travel time reliability, should be the goal. Research shows that over 50 percent of congestion in urban areas is caused by incidents, work zones, weather, and special events. The most efficient way for an operating agency to control congestion is to target and manage congestion caused by these sources. One such way to do so is to provide real-time information to assist travellers in meeting their travel goals (Source: *2009 Urban Congestion Trends*, FHWA-HOP-10-032, Federal Highway Administration [FHWA] Office of Operations).

Safer travel is also a concern. In 2009, Florida experienced 25,563 traffic fatalities. While this number decreased from the previous year, Florida's fatality rate per VMT (100 million vehicle miles travelled) is 1.30, which is higher than the national average of 1.13 VMT (Source: Fatality Analysis Reporting System (FARS) Data Resource web site, National Highway Traffic Safety Administration [NHTSA]). With nearly one-fifth of Florida's population over the age of 65, safety for older drivers and for all drivers remains a top priority. Although fatal crash involvement rates have declined substantially for older drivers in recent years, older drivers are more likely to be seriously injured or killed from their injuries (Source: *Research Report:*

Declines in fatal crashes of older drivers: changes in crash risk and survivability, Ivan Cheung and Anne T. McCartt, June 2010, Insurance Institute for Highway Safety).

Transportation funding remains limited and must be carefully allocated to meet agency objectives regarding safety, mobility, commerce, and environmental preservation. Projects compete for limited funds, and FDOT is facing a need to manage and operate its entire multimodal transportation system both efficiently and effectively.

FDOT has recognized this need to move toward mobility, defined networks, and development of an integrated operations and management program that focuses on providing multimodal mobility and safety outcomes Florida's travelling public. On May 20, 2010, FDOT's Executive Board endorsed the creation of the TS&O Program. TSM&O is defined as:

> **An integrated *program* to optimize the *performance* of existing *multimodal* infrastructure through implementation of systems, services, and projects to preserve capacity and improve the *security, safety and reliability* of Florida's transportation system.**

FDOT's TSM&O Program encompasses a wide variety of functions and operations solutions available within FDOT, spanning planning and development, construction, system operations, and maintenance. Figure 1 graphically depicts this relationship.

Figure 1: TSM&O Components

TSM&O is consistent with national direction and research initiatives. The United States Department of Transportation (USDOT) is preparing for the potential emphasis on performance monitoring in the new surface transportation reauthorization bill. Stated recently,

> *"A 12-person panel of top U.S. Department of Transportation officials outlined an agenda of transportation policy reform centered on performance measures and transparency during a packed Transportation Research Board Annual Meeting session this week." (*Source: *American Association of State Highway and Transportation Officials [AASHTO] Journal*, January 28, 2011*).*

Federal initiatives such as Integrated Corridor Management (ICM) focus attention on operations and management of the transportation system by enabling departments of transportation (DOT) to optimize use of available infrastructure by directing travelers to underutilized capacity in a transportation corridor. Strategies include motorists shifting their trip departure times, routes, or modal choices; or transportation agencies dynamically adjusting capacity by changing metering rates at entrance ramps or adjusting traffic signal timings to accommodate demand fluctuations. Multijurisdictional partner agencies manage ICM corridors as collaborative, multimodal systems. At the federal level, three USDOT agencies – Research and Innovative Technology Administration (RITA), FHWA, and Federal Transit Administration (FTA) – are partnering with eight of the nation's busiest corridors in a multiyear initiative to develop, deploy, and evaluate ICM concepts.

Active traffic management (ATM) is the implementation of ITS to promote active management to optimize existing infrastructure to address congestion.

FHWA's Connected Vehicle research has the potential to transform travel as it is defined today. At the core of this research is a networked environment supporting high-speed transactions to enable numerous safety and mobility applications.

These initiatives are consistent with focused attention on operations and management of the transportation system. Research projects related to TSM&O as well as travel time reliability are active at this time.

3.1 TSM&O Program Overview

In 2008, FDOT's Executive Board recommended the establishment of a TSM&O Task Team. The team's role was to develop a *Tier 2 Business Plan* for TSM&O; the Tier 2 Plan is included in Appendix A. FDOT has several levels of business plans ranging from one for the entire FDOT to more specific and detailed department or office-level guidance documents. A Tier 2 Plan is made up of functions that are available statewide and are created as a cooperative effort between the Central Office and the Districts. Tier 2 Business Plans include actions related to Leadership; Strategic Planning; Customer and Market Focus; Measurement, Analysis, and Knowledge Management; Human Resources Focus; Process Management; and Organization Performance

Results. The TSM&O Task Team held many meetings, discussed TSM&O concepts at length, created a Tier 2 Plan as well as a Strategic Plan outline, and proposed specific policy action recommendations to the Executive Board.

The *TSM&O Tier 2 Business Plan* defines the following TSM&O vision and mission statements:

> **Vision**: To operate our transportation system at the highest level of cost effective performance.
>
> **Mission**: To deploy a customer-driven TSM&O program focused on mobility outcomes through real-time and effective management of the existing transportation system toward its maximum efficiency.

The vision as defined in the Tier 2 Plan for arterial and freeway operations is:

> To operate our transportation system at the highest level of cost-effective performance, resulting in reduced excess delay on arterials AND freeways, real-time management and traveller information for all modes, and seamless coordination with ALL operating agencies.

On May 20, 2010, FDOT's Executive Board endorsed TSM&O as an FDOT program. The FDOT Secretary called for the creation of a TSM&O Leadership Team of FDOT executives from Central Office and the Districts to provide leadership and direction to the current TSM&O Task Team. The formal definition and clarifying statement (shown below) and outlines of the Strategic Plan and Tier 2 Business Plan were also approved at that time.

> **Formal Definition:** TSM&O is an integrated program to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety, and reliability of our transportation system.
>
> **Clarifying Statement:** TSM&O is a new program within FDOT based on measuring performance, actively managing the multimodal transportation network, and delivering positive safety and mobility outcomes to the travelling public in Florida.

TSM&O will require:

- Organizational change/evolution to operations and management of all surface transportation systems/networks in real time.
- Performance driven approach for solving congestion problems using tools, such as ITS, signal system control, and other management and operational strategies to identify and correct the causes of congestion in real-time.

TSM&O will result in:

- Real-time traveller information for all modes,
- Rapid incident response,
- Capacity management on limited-access facilities and arterials,
- Improved travel time reliability,
- Better traffic flow through work zones,
- Improved safety, and
- Cost savings.

Through:

- Integration of planning and operations.
- High level of communication and coordination with local transit, freight, and traffic entities,
- Maximization of existing infrastructure, and
- Maximization of tools and data for mobility and safety outcomes.

Overall, the benefit-cost (BC) ratio of systems operations measures (enabled by ITS) has been estimated at about 9:1, far above conventional highway capacity projects, which have a BC ratio of 2.7:1 (Source: USDOT RITA, Jan 2009). Using technology solutions instead of traditional capacity enhancements, such as roadway widening, results in lower capital and maintenance costs. Technologies, operating practices, programs, and strategies provide methods to get the most efficiency out of the road or transit capacity that is built, typically for relatively modest costs and low environmental effects. In some cases, the operational improvements are some of the few strategies that can be approved, funded, and implemented. The improvements may be built within the existing right-of-way, and they provide the opportunity to recapture roadway capacity that is lost to congestion and incidents.

TTI's *2010 Urban Mobility Report* identifies a number of available operational treatments that can decrease travel times and increase travel time reliability, remove incidents, and reduce the impact of traffic disruptions, reduce delays, and reduce secondary crashes:

- Ramp metering
- Freeway incident management programs
- Traffic signal coordination programs
- Arterial street access management programs

While not an all-inclusive list, these improvements are examples of operational treatments with demonstrated positive results in enhancing safety, reducing congestion, and improving safety.

3.2 Strategic Plan Overview

This *Strategic Plan* is a high-level document describing the need for TSM&O, program definition, and plan for deployment. It lays the groundwork for establishing and maintaining such a program at FDOT. It recommends actions which must be taken within FDOT in the next five years to successfully establish a TSM&O Program at the Central and District Office levels. The actions are further detailed in the *Tier 2 Business Plan* and will ensure the following outcomes:

- Champions are identified and pilot programs initiated;
- Policies/procedures are established, as appropriate; and
- Dashboard is created to report on results in terms of system and business plan performance measures

This *Strategic Plan* is consistent with the *2005 ITS Strategic Plan Update*, FDOT's mission statement, and the *2020 FTP* and its Short-Range Component. Work is also progressing to incorporate TSM&O into the *2060 FTP*.

4 Implementing TSM&O

This section describes the activities and actions needed to deploy TSM&O. These include those activities and actions affecting FDOT operations and planning, project development, and construction and maintenance.

4.1 FDOT Operations and Planning

FDOT Operations and Planning encompasses the organization and establishment of roles, responsibilities, and assignments to sustain the TSM&O Program.

The following Operations and Planning actions must be accomplished over the next five years. They are discussed in terms of people (i.e., Central Office and District champions and task teams), processes (i.e., performance measures, network identification, and pilot programs), and tools (i.e., travel time data collection/analysis/archiving/reporting, travel demand, and simulation models). Each of these items is listed in the *Tier 2 Plan* with associated performance measures and targets. The *Tier 2 Plan* also includes the development of technical memoranda for initiatives such as Connected Vehicle, new data sources, benefit-cost analyses for projects, adoption of funding flexibility, and work zone sketch planning.

Table 1: FDOT Operations and Planning Recommendations

Organization Aspect	Recommended Action	Near Term (2011-2012)	Long Term (2012-2014)
People	Establish a Leadership Team - Meet on a regular basis, review Tier 2 Plan and Strategic Plan	✓	
	Maintain a TSM&O Task Team to support the Leadership Team. Ensure representation from all relevant offices	✓	
	Establish TSM&O Office Structure	✓	
Processes	Develop a Maturity Model to plan and implement TSM&O	✓	
	Build on existing performance measures efforts within the Department to establish a TSM&O Dashboard	✓	
	Develop a Benefit-Cost process and adopt it for all projects	✓	
	Establish a process for network identification	✓	
	Identify and implement pilot projects	✓	
	Develop and implement an Outreach Plan	✓	
Tools	Ensure Data Management and Knowledge Management are in place	✓	
	Ensure Data Archive (University of Florida) (Steward) is funded by FDOT. This could be a joint office effort (Planning, Operations, Safety).	✓	

4.2 FDOT Project Development Cycle

FDOT Project Development Cycle encompasses ways that TSM&O can be embedded as an integral component of all transportation projects.

The following are examples of how TSM&O activities could be incorporated into the Project Development Cycle. These activities all support the objectives of the *Tier 2 Plan*. The *Strategic Plan* describes in detail how they will be implemented.

Table 2: FDOT Project Development Cycle Recommendations

FDOT Project Development Cycle	Recommended Action
Project Development	All projects undergo a BC or Net Present Value (NPV) assessment.
	Operations is incorporated into every project
	Projects are selected based on the ability to maximize operations and capacity
Planning	Operations would be incorporated into long range plans (Metropolitan Planning Organization [MPO] and Corridor Master Plans)
	Develop and maintain data, tools, and performance measures to assess operations projects
	Ensure tools and modeling take into account the impact of operations and capacity projects alike
	Networks for operations are planned and taken into account in MPO plans
	Formal Memoranda of Understanding (MOU) or interagency agreements in place for operating defined transit, arterial, and freeway systems
PD&E	All projects consider TSM&O
Design	Operations is considered during construction
Operations	Networks identified and freeways and arterials truly managed
	Defined statewide program for Advanced Traffic Management System (ATMS) operations and support
	Institutionalize and apply performance measures
Construction	Real-time traffic management during all construction Maintenance of Traffic (MOT) phases
Maintenance	Real-time management of traffic during maintenance activities
	Sensors deployed and used to monitor infrastructure condition
All Departments	Agree to and implement performance measurement dashboard (foundation)

4.3 FDOT Policies and Procedures

The following near- and long-term high-level policy actions are recommended in order to institutionalize TSM&O.

Table 3: FDOT High-Level Policy Recommendations

FDOT Level	Recommended Action	Near Term (2011-2012)	Long Term (2012-2014)
Central Office	Develop a formal TSM&O program within FDOT	✓	
	Develop TSM&O tools, guidance, and policy	✓	
	Finalize/publish TSM&O Strategic Plan and Tier 2 Business Plan	✓	
	Require Districts to develop/update Tier Business Plan for TSM&O		✓
	Develop accountability mechanisms (dashboard)	✓	
	TSM&O formally considered in FDOT, MPO, Planning, and Project Development processes.		✓
	TSM&O reflected in key FDOT policies/procedures		✓
	Defined Statewide Program for ATMS operation/maintenance support		✓
	Defined interagency TSM&O policies, procedures, protocols		✓
Districts	Select focus areas under program	✓	
	Identify a champion in each District	✓	
	Define applicable networks (freeways, arterials, other) for performance-based management through TSM&O	✓	
	Develop/update Tier Business Plan for TSM&O		✓

5 Timeline

Table 4 summarizes a timeline for when the key actions described in Section 4 as well as all activities listed in the *Tier 2 Plan* may begin, based on timeframes identified in the *Tier 2 Plan*. Calendar years for accomplishment of the key actions are broken into quarters. Some actions identified for 2010 and early 2011 may have begun already.

Table 4: TSM&O Timeline

Aspect	Recommended Action	Responsible	2010				2011				2012				2013			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
People	Establish a Leadership Team - Meet on a regular basis, review Tier 2 Plan and Strategic Plan	Central Office				■												
	Maintain a TSM&O Task Team to support the Leadership Team. Ensure representation from all relevant offices	Central Office				■												
	Establish TSM&O Office Structure	Central Office				■												
	Identify a TSM&O champion in each District	Districts				■												
	Create TSM&O training program/training opportunities	Central Office							■									
	Create TSM&O career development opportunities	Central Office							■									
Processes	Develop a formal TSM&O program within FDOT	Central Office		■														
	Develop and implement an Outreach Plan	Central Office		■														
	Calculate financial implications of program restructuring	Central Office				■												
	Develop a Benefit-Cost process and adopt it for all projects	Central Office				■												
	Finalize/publish TSM&O Strategic Plan and Tier 2 Business Plan	Central Office		■														
	TSM&O formally considered in FDOT, MPO, Planning, PD&E processes.	Central Office					■											
	Defined interagency TSM&O policies, procedures, protocols	Central Office					■											
	Identify resource needs	Central Office				■												
	Require Districts to develop/update Tier Business Plan for TSM&O	Central Office						■										
	Develop/update Tier Business Plan for TSM&O	Districts						■										
	Select focus areas under program	Districts			■													
	Identify and implement pilot projects	Central Office				■												

Aspect	Recommended Action	Responsible	2010				2011				2012				2013			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Develop process to channel information from Tier TSM&O Business Plan components into the OPR dashboard	Central Office																
	Develop process to systematically review and modify the OPR dashboard	Central Office																
	Develop a more formal set of policies and procedures while working with public safety.	Central Office																
	Develop and update statewide and regional department planning and programming processes to integrate TSM&O	Central Office																
	Develop guidance and best management practices related to work zone management processes	Central Office																
	TSM&O reflected in key FDOT policies/procedures	Central Office																
Tools	Develop TSM&O tools, guidance, and policy	Central Office																
	Establish a process for network identification	Central Office																
	Define applicable networks (freeways, arterials, other) for performance-based management through TSM&O	Districts																
	Conduct customer satisfaction surveys	Central Office																
	Build on existing performance measures efforts within the Department to establish a TSM&O Dashboard	Central Office																
	Develop a Maturity Model to plan and implement TSM&O	Central Office																
	Defined Statewide Program for ATMS operation/maintenance support	Central Office																
	Ensure Data Management and Knowledge Management are in place	Central Office																
	Develop accountability mechanisms (Dashboard)	Central Office																

Aspect	Recommended Action	Responsible	2010				2011				2012				2013			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Establish a system to track the District's communication and data collection capabilities	Central Office																
	Establish communications and data collection deployment goals	Central Office																
	Ensure Data Archive (University of Florida) (Steward) is funded by FDOT. This could be a joint office effort (Planning, Operations, Safety).	Central Office																

6 Resources

FDOT's TSM&O Program needs commitment from executive and staff level teams in order to move forward and successfully realize goals and objectives. This is particularly true because TSM&O spans multiple offices and functions within FDOT.

The TSM&O Leadership Team is comprised of executive leaders from the Central Office and the Districts. Once their meeting schedule is established, they will provide high-level direction and policy guidance for implementation of TSM&O actions. The TSM&O Task Team will continue to meet to carry out the Leadership Team's directives and work at the staff and project levels to incorporate TSM&O concepts into FDOT projects and practices.

Time and team member commitment are needed to strategically implement TSM&O actions and measure the program's performance. This new program to actively manage the multimodal transportation network may take several years to achieve widespread results. However, as TSM&O actions and practices are put into place, FDOT will achieve important and measurable improvements to safety and mobility.

7 References

A Pocket Guide to Florida Transportation Trends and Conditions 2010, FDOT Office of Policy

VMT Report 2010, FDOT Statistics Office

A Pocket Guide to Florida Transportation Trends and Conditions 2010, FDOT Office of Policy

2009 Urban Congestion Trends, FHWA-HOP-10-032, Federal Highway Administration [FHWA] Office of Operations

Fatality Analysis Reporting System (FARS) Data Resource web site, National Highway Traffic Safety Administration [NHTSA]

Research Report: Declines in fatal crashes of older drivers: changes in crash risk and survivability, Ivan Cheung and Anne T. McCartt, June 2010, Insurance Institute for Highway Safety

American Association of State Highway and Transportation Officials [AASHTO] Journal, January 28, 2011

USDOT RITA, Jan 2009

8 Appendix A

Transportation System Management & Operation (TSM&O) Tier 2 Business Plan - DRAFT

2/23/2010

Vision:	To operate our transportation system at the highest level of cost effective performance.
Mission:	To deploy a customer driven TSM&O program focused on mobility outcomes through real-time and effective management of the existing transportation system toward its maximum efficiency.

	OBJECTIVES	ACTIVITIES	PERFORMANCE INDICATOR	Targets (%, Score, Timeframe,etc)	PROGRESS (Current Status)	PERSON(S) RESPONSIBLE
LEADERSHIP	Provide leadership to establish a TSM&O program in the Department 1.Establishing outreach and education program on TSM&O 2.Evaluating funding requirements for program to meet targets 3. Demonstrating Benefit Cost and Net Present Value 4. Executive Board endorses and supports the TSM&O Program	1.Periodic presentations to Department at all levels 2. Meetings with partner agencies 3.Calculate financial implications of program restructuring 4. Develop a process whereby projects are evaluated by NPV and BC 5. Measure and report key performance measures to FDOT, Florida Transportation Commission and others	1. Development of Outreach Plan 2. Implementation of Outreach Plan 3. Financial implications of program restructuring identified 4. B/C ratios calculated 5. B/C ratios of ops projects realized 6. Key performance measures reported	1. April 2010 2. April 2010 3. December 2010 4. December 2010 5. December 2010 6. Annually	1. Ongoing 2. Ongoing 3. Initial Stages 4. Initial Stages 5. Initial Stages 6. Ongoing	
STRATEGIC PLANNING	Plan for successful implementation of TSM&O in the Department by ensuring resources are programmed to meet future network performance objectives	1. Develop a strategic plan - Benchmark where FDOT is with respect to TSM&O 2.In cooperation/coordination with MPOs and Planning offices identify plan to address gaps and incorporate plan into Work Program development process 3. Identify resource needs 4. identify organizational structure 5. Update/Revise Tier plans (Traffic Operations, Planning, Construction, Maintenance) to include and support TSM&O efforts	1. Strategic Plan developed 2. Plan identified and incorporated into Work Program 3. Resource needs identified 4. Structure identified 5. Tier Plans revised	1.Draft Report April 2010 2. March 2011 3. November 2010 4. November 2010 5. June 2011	1. Ongoing 2. Initial Stages 3. Initial Stages 4. Initial Stages 5. Initial Stages	

	OBJECTIVES	ACTIVITIES	PERFORMANCE INDICATOR	Targets (%, Score, Timeframe,etc)	PROGRESS (Current Status)	PERSON(S) RESPONSIBLE
CUSTOMER & MARKET FOCUS	Providing safety and mobility benefits to the traveling public by increasing network performance for key network customers/modes	1. Identify key network customers, modes, how the outreach will occur (survey?focus groups?) -motorist -emergency responders -freight/trucking -transit tourist 2. Identify performance objectives associated with key customers and modes (needs) 3. Reflect performance objectives in network performance measurement system design (build into network system) 4. Conduct Customer Satisfaction surveys	1.Key customers, modes and outreach methods identified 2. Performance objectives identified 3. Performance objectives reflected in system design 4. Surveys conducted	1. August 2010 2. August 2010 3. December 2010 4. March 2011	1. Initial Stages 2. Initial Stages 3. Initial Stages 4. Initial Stages	
MEASUREMENT, ANALYSIS AND KNOWLEDGE MANAGEMENT	Continually measure success of TSM&O by developing the ability to measure and report TSM&O performance gains	1. Develop systems thru which TSM&O systems performance is measured, reported and known 2. Develop OPR dashboard and how it is updated 3. Report Tier Business Plan progress (ie what is being done for TSM&O stakeholders (inside and outside of the Dept)) 4. TSM&O performance is used to identify resources needed to improve cost effectiveness and to enhance support for program 5. Establish a system to track the District's communication and data collection capabilities. 6. Establish communications and data collection deployment goals.	1.Tracking System developed 2. Dashboard developed 3. TIER Business Plan progress reported 4. Additional resources identified 5. Data Collection and communication tracking system developed 6. data collection and communication deployment goals established	1. Ongoing 2. Sept 2010 3. Annually Sept 2010 4. November 2010 5. November 2010 6. December 2010	1. Ongoing 2. Initial Stages 3. Initial Stages 4. Initial Stages 5. Initial Stages 6. Initial Stages	
Human Resources Focus	Ensure staff resources to implement program by identifying staff and defining roles to implement the program	1. Incorporate TSM&O into the Department 2. Create training program / training opportunities a. Operations Academy b. PE Training Orientation 3. Create Career development opportunities a. institute mentoring/career development opportunities b. foster cross training initiatives across different offices c. investigate job enhancement strategies and collaboration	1. TSM&O mainstreamed into the Department 2. Training opportunities created at a district and Central Office level 3. Career development opportunities created	1. June 2011 2. September 2011 3. September 2011	1. Initial Stages 2. Ongoing 3. Ongoing	

	OBJECTIVES	ACTIVITIES	PERFORMANCE INDICATOR	Targets (%, Score, Timeframe,etc)	PROGRESS (Current Status)	PERSON(S) RESPONSIBLE
PROCESS MANAGEMENT	Ensure processes are in place to establish and implement a TSM&O program 1.To increase collaboration and coordination across FDOT functional areas and partner agencies 2. To ensure TSM&O strategies incorporated into processes for District projects in Construction, Maintenance, Production 3. Providing a uniform easily understood set of tools to use with mega construction projects 4.To increase trends in net outreach 5. To increase trends in net resources 6.To increase trends in net present value (NPV)/ Benefit Cost Ratio (B/C)	1.Develop process to channel information from Tier TSM&O Business Plan components into the OPR dashboard. 2.Develop process to systematically review and modify the OPR dashboard Mobility Reliability Delay Incident Duration 3. Develop a more formal set of policies and procedures dealing with operations while working with public safety - develop a joint operations policy for improving public safety 4. Update the Business Plans for functional areas and how they support TSM&O what processes to be developed or modified (ex - measure congestion in urban areas) 5. Develop and update statewide and regional department planning and programming processes to integrate TSM&O 6. Develop guidance and best management practices related to work zone management processes	1. Process to populate the dashboard created 2. Process to review and modify the dashboard created 3. Policies and Procedures developed 4. Business Plans updated 5. Planning and programming processes developed and updated 6. Best Management practices developed.	1. Sept 2010 2. Sept 2010 3. Sept 2010 4. June 2011 5. June 2011 6. October 2010	1. Initial Stages 2. Initial Stages 3. Initial Stages 4. Initial Stages 5. Initial Stages 6. Initial Stages	
ORGANIZATIONAL PERFORMANCE RESULTS	1.Executive Board supports and endorses TSM&O program 2.Develop and report on performance measures both on a program and network level -delay -incident clearance -travel time reliability -Work zone mobility 3.Calculate cost effectiveness of Program NPV/BC 4. Increasing Net Present Value of network operations/management investment 5.Report on Adherence and compliance to Strategic Plan 6. Human Resources -build Professional Capacity					